

occur in the airplane. This demonstration must include an evaluation of airplane structural configurations and be supported by test evidence and analysis at a minimum and, if available, service experience, or service experience and teardown inspection results, of high-time airplanes of similar structural design, accounting for differences in operating conditions and procedures. The airplane structural configurations to be evaluated include—

(i) All model variations and derivatives approved under the type certificate for which approval for an extension is sought; and

(ii) All structural modifications to and replacements for the airplane structural configurations specified in paragraph (b)(1)(i) of this section, mandated by airworthiness directive, up to the date of approval of the extended LOV.

(2) Establish a revision or supplement, as applicable, to the Airworthiness Limitations section (ALS) of the Instructions for Continued Airworthiness required by § 25.1529 of this subchapter, and submit it to the FAA Oversight Office for approval. The revised ALS or supplement to the ALS must include the applicable extended LOV established under paragraph (b)(1) of this section.

(3) Develop the maintenance actions determined by the WFD evaluation performed in paragraph (b)(1) of this section to be necessary to preclude WFD from occurring before the airplane reaches the proposed extended LOV. These maintenance actions must be documented as airworthiness limitation items in the ALS and submitted to the FAA Oversight Office for approval.

### Subpart D—Fuel Tank Flammability

SOURCE: Docket No. FAA-2005-22997, 73 FR 42499, July 21, 2008, unless otherwise noted.

#### § 26.31 Definitions.

For purposes of this subpart—

(a) *Fleet Average Flammability Exposure* has the meaning defined in Appendix N of part 25 of this chapter.

(b) *Normally Emptied* means a fuel tank other than a Main Fuel Tank.

Main Fuel Tank is defined in 14 CFR 25.981(b).

#### § 26.33 Holders of type certificates: Fuel tank flammability.

(a) *Applicability.* This section applies to U.S. type certificated transport category, turbine-powered airplanes, other than those designed solely for all-cargo operations, for which the State of Manufacture issued the original certificate of airworthiness or export airworthiness approval on or after January 1, 1992, that, as a result of original type certification or later increase in capacity have:

(1) A maximum type-certificated passenger capacity of 30 or more, or

(2) A maximum payload capacity of 7,500 pounds or more.

(b) *Flammability Exposure Analysis.* (1) *General.* Within 150 days after December 26, 2008, holders of type certificates must submit for approval to the FAA Oversight Office a flammability exposure analysis of all fuel tanks defined in the type design, as well as all design variations approved under the type certificate that affect flammability exposure. This analysis must be conducted in accordance with Appendix N of part 25 of this chapter.

(2) *Exception.* This paragraph (b) does not apply to—

(i) Fuel tanks for which the type certificate holder has notified the FAA under paragraph (g) of this section that it will provide design changes and service instructions for Flammability Reduction Means or an Ignition Mitigation Means (IMM) meeting the requirements of paragraph (c) of this section.

(ii) Fuel tanks substantiated to be conventional unheated aluminum wing tanks.

(c) *Design Changes.* For fuel tanks with a Fleet Average Flammability Exposure exceeding 7 percent, one of the following design changes must be made.

(1) *Flammability Reduction Means (FRM).* A means must be provided to reduce the fuel tank flammability.

(i) Fuel tanks that are designed to be Normally Emptied must meet the flammability exposure criteria of Appendix M of part 25 of this chapter if any portion of the tank is located within the fuselage contour.

(ii) For all other fuel tanks, the FRM must meet all of the requirements of Appendix M of part 25 of this chapter, except, instead of complying with paragraph M25.1 of this appendix, the Fleet Average Flammability Exposure may not exceed 7 percent.

(2) *Ignition Mitigation Means (IMM)*. A means must be provided to mitigate the effects of an ignition of fuel vapors within the fuel tank such that no damage caused by an ignition will prevent continued safe flight and landing.

(d) *Service Instructions*. No later than December 27, 2010, holders of type certificates required by paragraph (c) of this section to make design changes must meet the requirements specified in either paragraph (d)(1) or (d)(2) of this section. The required service instructions must identify each airplane subject to the applicability provisions of paragraph (a) of this section.

(1) *FRM*. The type certificate holder must submit for approval by the FAA Oversight Office design changes and service instructions for installation of fuel tank flammability reduction means (FRM) meeting the criteria of paragraph (c) of this section.

(2) *IMM*. The type certificate holder must submit for approval by the FAA Oversight Office design changes and service instructions for installation of fuel tank IMM that comply with 14 CFR 25.981(c) in effect on December 26, 2008.

(e) *Instructions for Continued Airworthiness (ICA)*. No later than December 27, 2010, holders of type certificates required by paragraph (c) of this section to make design changes must submit for approval by the FAA Oversight Office, critical design configuration control limitations (CDCCL), inspections, or other procedures to prevent increasing the flammability exposure of any tanks equipped with FRM above that permitted under paragraph (c)(1) of this section and to prevent degradation of the performance of any IMM provided under paragraph (c)(2) of this section. These CDCCL, inspections, and procedures must be included in the Airworthiness Limitations Section (ALS) of the ICA required by 14 CFR 25.1529 or paragraph (f) of this section. Unless shown to be impracticable, visible means to identify critical features of

the design must be placed in areas of the airplane where foreseeable maintenance actions, repairs, or alterations may compromise the critical design configuration limitations. These visible means must also be identified as a CDCCL.

(f) *Airworthiness Limitations*. Unless previously accomplished, no later than December 27, 2010, holders of type certificates affected by this section must establish an ALS of the maintenance manual or ICA for each airplane configuration evaluated under paragraph (b)(1) of this section and submit it to the FAA Oversight Office for approval. The ALS must include a section that contains the CDCCL, inspections, or other procedures developed under paragraph (e) of this section.

(g) *Compliance Plan for Flammability Exposure Analysis*. Within 90 days after December 26, 2008, each holder of a type certificate required to comply with paragraph (b) of this section must submit to the FAA Oversight Office a compliance plan consisting of the following:

(1) A proposed project schedule for submitting the required analysis, or a determination that compliance with paragraph (b) of this section is not required because design changes and service instructions for FRM or IMM will be developed and made available as required by this section.

(2) A proposed means of compliance with paragraph (b) of this section, if applicable.

(h) *Compliance Plan for Design Changes and Service Instructions*. Within 210 days after December 26, 2008, each holder of a type certificate required to comply with paragraph (d) of this section must submit to the FAA Oversight Office a compliance plan consisting of the following:

(1) A proposed project schedule, identifying all major milestones, for meeting the compliance dates specified in paragraphs (d), (e) and (f) of this section.

(2) A proposed means of compliance with paragraphs (d), (e) and (f) of this section.

(3) A proposal for submitting a draft of all compliance items required by paragraphs (d), (e) and (f) of this section for review by the FAA Oversight

Office not less than 60 days before the compliance times specified in those paragraphs.

(4) A proposal for how the approved service information and any necessary modification parts will be made available to affected persons.

(i) Each affected type certificate holder must implement the compliance plans, or later revisions, as approved under paragraph (g) and (h) of this section.

[Doc. No. FAA-2005-22997, 73 FR 42499, July 21, 2008, as amended by Amdt. 26-3, 74 FR 31619, July 2, 2009]

**§ 26.35 Changes to type certificates affecting fuel tank flammability.**

(a) *Applicability.* This section applies to holders and applicants for approvals of the following design changes to any airplane subject to 14 CFR 26.33(a):

(1) Any fuel tank designed to be Normally Emptied if the fuel tank installation was approved pursuant to a supplemental type certificate or a field approval before December 26, 2008;

(2) Any fuel tank designed to be Normally Emptied if an application for a supplemental type certificate or an amendment to a type certificate was made before December 26, 2008 and if the approval was not issued before December 26, 2008; and

(3) If an application for a supplemental type certificate or an amendment to a type certificate is made on or after December 26, 2008, any of the following design changes:

(i) Installation of a fuel tank designed to be Normally Emptied,

(ii) Changes to existing fuel tank capacity, or

(iii) Changes that may increase the flammability exposure of an existing fuel tank for which FRM or IMM is required by § 26.33(c).

(b) *Flammability Exposure Analysis*—(1) *General.* By the times specified in paragraphs (b)(1)(i) and (b)(1)(ii) of this section, each person subject to this section must submit for approval a flammability exposure analysis of the auxiliary fuel tanks or other affected fuel tanks, as defined in the type design, to the FAA Oversight Office. This analysis must be conducted in accordance with Appendix N of part 25 of this chapter.

(i) Holders of supplemental type certificates and field approvals: Within 12 months of December 26, 2008,

(ii) Applicants for supplemental type certificates and for amendments to type certificates: Within 12 months after December 26, 2008, or before the certificate is issued, whichever occurs later.

(2) *Exception.* This paragraph does not apply to—

(i) Fuel tanks for which the type certificate holder, supplemental type certificate holder, or field approval holder has notified the FAA under paragraph (f) of this section that it will provide design changes and service instructions for an IMM meeting the requirements of § 25.981(c) in effect December 26, 2008; and

(ii) Fuel tanks substantiated to be conventional unheated aluminum wing tanks.

(c) *Impact Assessment.* By the times specified in paragraphs (c)(1) and (c)(2) of this section, each person subject to paragraph (a)(1) of this section holding an approval for installation of a Normally Emptied fuel tank on an airplane model listed in Table 1 of this section, and each person subject to paragraph (a)(3)(iii) of this section, must submit for approval to the FAA Oversight Office an assessment of the fuel tank system, as modified by their design change. The assessment must identify any features of the design change that compromise any critical design configuration control limitation (CDCCL) applicable to any airplane on which the design change is eligible for installation.

(1) Holders of supplemental type certificates and field approvals: Before June 26, 2011.

(2) Applicants for supplemental type certificates and for amendments to type certificates: Before June 26, 2011 or before the certificate is issued, whichever occurs later.

TABLE 1

Model—Boeing
747 Series
737 Series
777 Series
767 Series